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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/090,446	03/04/2002	Anurag Ateet Gupta	3030.006USU	3406

7590 02/24/2004

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EXAMINER	
NGUYEN, TAM M	

ART UNIT	PAPER NUMBER
1764	

DATE MAILED: 02/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/090,446	GUPTA ET AL.	
	Examiner	Art Unit	
	Tam M. Nguyen	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11/28/03*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) *27-38* is/are withdrawn from consideration.

5)☒ Claim(s) *25 and 26* is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The expressions "crude oil feed" line 3 of claim 1, "the petroleum hydrocarbon solvent" in claim 2, and "the crude oil feed" in line 1 of claim 4 render the claims indefinite because it is unclear whether "the crude oil feed" or "the petroleum hydrocarbon solvent" is the feedstock.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yenni et al. (5,997,732).

Yenni discloses a process for treating a white mineral oil having a boiling point of above 350° F (177° C) by contacting the oil with an adsorbent such as modified clay at an ambient temperature to improve the Saybolt color of finished white oil. The adsorbent has total acidity of from 8-13 KOH/g and a surface area of from 150-350 m^2/g. The adsorbent is regenerated and pretreated by heating at a temperature of from 50-300° C in the presence of nitrogen. (See col. 1, lines 17-42; col. 2, line 33 through col. 5, line 54; Table I; col. 8, line 1-38; Table IV)

Regarding claims 1 and 14, Yenni does not specifically disclose the adsorption pressure. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Yenni by operating the adsorption process at an ambient pressure to 20 kg/cm^2 because Yenni does not limit the

adsorption pressure. Therefore, one of skill in the art would employ any pressure including the claimed pressure.

Regarding claims 2-4, Yenni does not specifically disclose that the mineral oil has saybolt color rating worse than +20 or rating in the range of +5 to +20 and does not disclose the origin of the mineral oil. However, it appears that any mineral oil can be used in the Yenni process. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Yenni by using a mineral oil having the claimed saybolt color because one of skill in the art would use any mineral oil having any saybolt color and from any origin including the claimed oil and origin and it would be expected the results would be the same or similar when using the claimed feed in the Yenni process because of the similarity between the claimed feed and the Yenni feed. As a result, it would be expected that the modified process of Yenni would produce a MTO having saybolt color, sulfur content and nitrogen content as claimed.

Regarding claims 5-7, Yenni does not disclose that the white oil comprises the claimed amount of sulfur (including mercaptan). However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Yenni by using a hydrocarbon feed comprising the claimed amount of sulfur because Yenni discloses that white oil comprises less than about 200 ppm sulfur and the adsorbent of Yenni would adsorb sulfur from the white oil. Therefore, using the claimed feed would not affect the outcomes of the Yenni process.

Regarding claim 16, Yenni does not disclose the adsorbent has a core diameter of 10 angstroms. However, it would have been obvious to one having ordinary skill in the

art at the time the invention was made to have modified the process of Yenni by using an adsorbent having the claimed diameter because one of skill in the art would use any adsorbent having any diameter including the claimed diameter and it would be expected that the results would be the same or similar when using an absorbent having a diameter of 10, 9, or 11 angstrom in the process of Yenni.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yenni et al. (5,997,732) in view of Biscardi et al. (6,579,441)

Yenni does not disclose that the adsorbent is 13x molecular sieve.

Biscardi disclose an adsorption process by contacting a hydrocarbon feed with a zeolite adsorbent such as 13X. (See col. 8, lines 1-29; table IV)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Yenni by using a 13X zeolite because the zeolite has an equivalent function as the clay adsorbent in the adsorption process.

Allowable Subject Matter

Claims 25 and 26 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: No prior art of record discloses or renders obvious a process for producing a mineral turpentine oil having a saybolt color better than +20 from a crude oil wherein the crude oil is distilled to produce kerosene/aviation turbine fuel cut (ATF) which is then subjected to Merox treatment to remove mercaptan from the cut. The treated cut is then

distilled to obtain MTO which is then contacted with an adsorbent to improve saybolt color.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tam M. Nguyen whose telephone number is (571) 272-1452. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tam M. Nguyen
Examiner
Art Unit 1764

TN

Walter D. Griffin
Primary Examiner